



U.S. Department of Energy
Office of Civilian Radioactive Waste Management



Repository Program Update

Presented to:
National Spent Nuclear Fuel Program Strategy Meeting

Presented by:
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Office of Repository Development

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Las Vegas, Nevada

OCRWM Realignment

- **Office of Repository Development**
 - **Office of License Application and Strategy**
 - » Includes engineering, science and PA
 - **Office of Facility Operations**
 - **Office of Project Control and Monitoring**
 - **Office of Project Support**
- **Office of Strategy and Program Development**
 - **Office of Systems Analysis and Strategy Development**
 - **Office of National Transportation**
 - » Includes Nevada transportation
 - **Office of Science & Technology and International**
 - **Office of Program Management**



Status of Key Project Activities

<u>Activity</u>	<u>Baseline Date</u>
CD-1 Approve Preliminary Baseline Range	10 OCT 02
Interim LA Design Review Complete	30 JAN 03
Freeze TSPA-LA Model	21 AUG 03
TSPA Model Analysis	22 DEC 03
Complete Repository Preliminary Design	30 JAN 04
Develop Preclosure Safety Analysis LA	27 FEB 04
DOE LSN Certification Letter to NRC	20 MAY 04
Complete TSPA for LA	22 JUN 04
DOE LSN Re-certification Letter to NRC	18 NOV 04
DOE OCRWM Submits LA to NRC	23 DEC 04

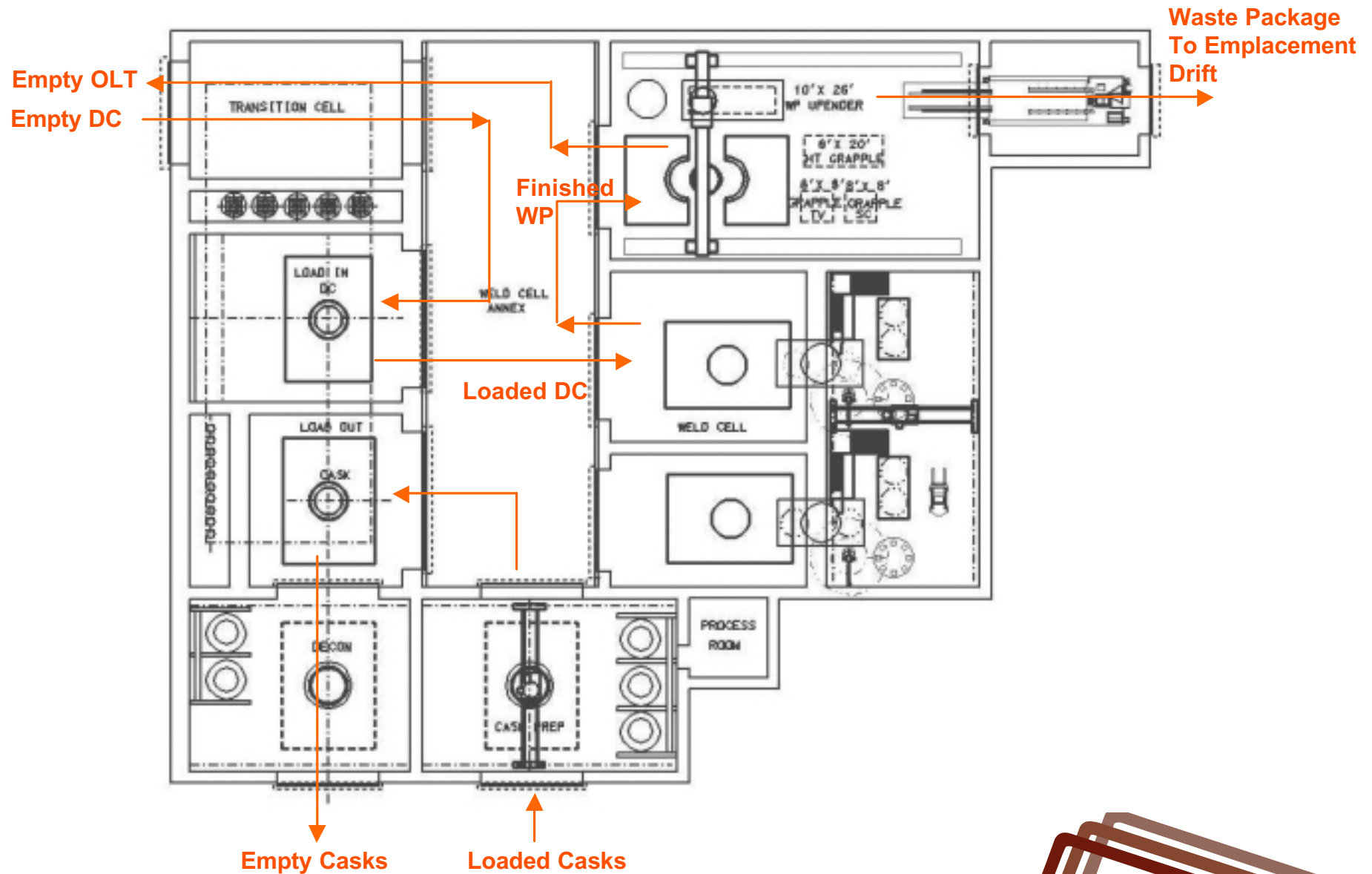


Potential Surface Facility Design

- **Multiple smaller buildings instead of single full capacity building**
 - Dry Facility 1 on line in 2010
 - Dry Facility 2 and Remediation Bldg to follow
- **Reduction of in-building storage capacity from 5000 MTHM to approx. 150 CSNF assemblies and 10 DOE SNF or HLW canisters**
- **Change from predominantly wet handling of CSNF assemblies to dry handling**
- **Transfer from transportation cask to disposal container to be done predominantly in hot cell**
- **Reduction of crane lifts through use of Omnidirectional Lift Transporter**

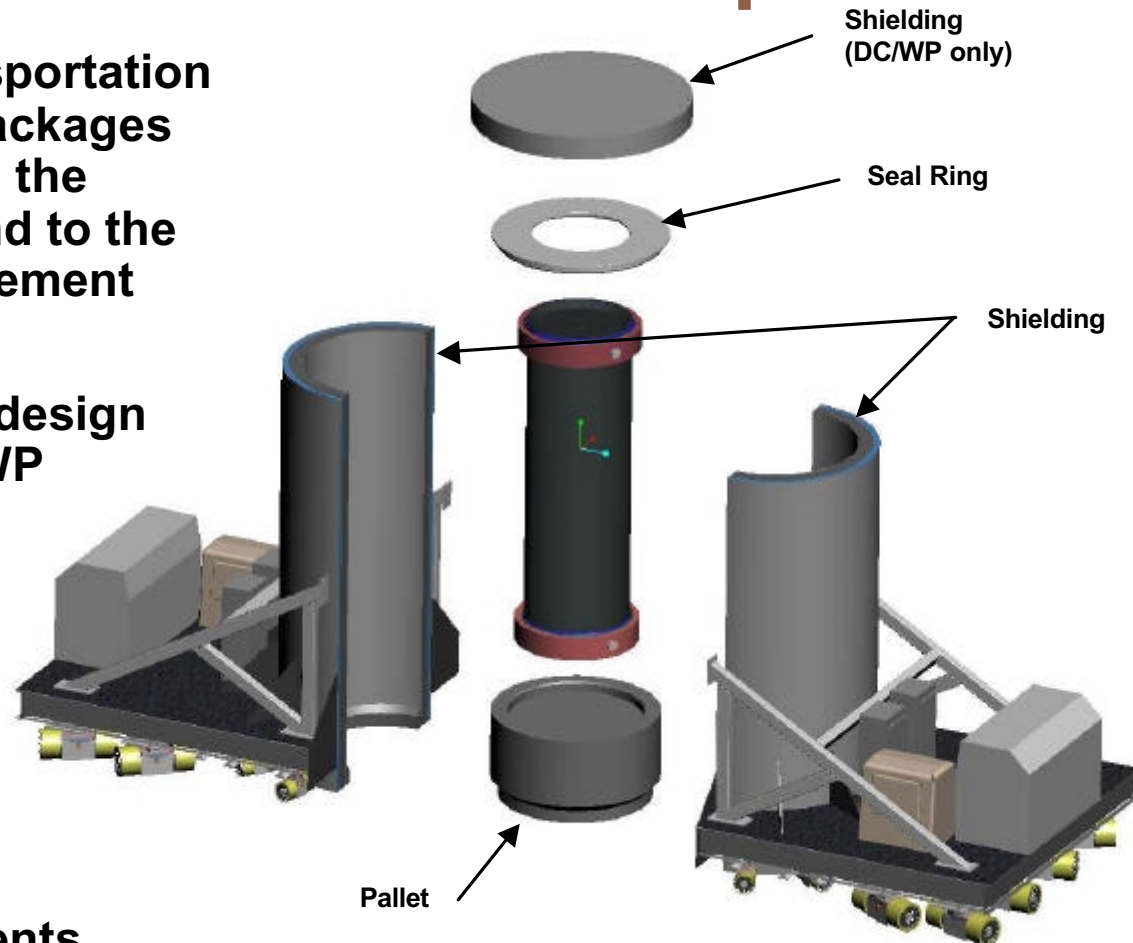


Dry Facility #1 Floor Plan



Omnidirectional Lift Transporter

- Used to move transportation casks and waste packages within and between the surface facilities and to the subsurface emplacement drifts
- Different shielding design for casks and DC/WP
- Accommodates different cask/WP sizes by adjusting pallet height
- Integral shielding to allow personnel access to recover from off-normal events



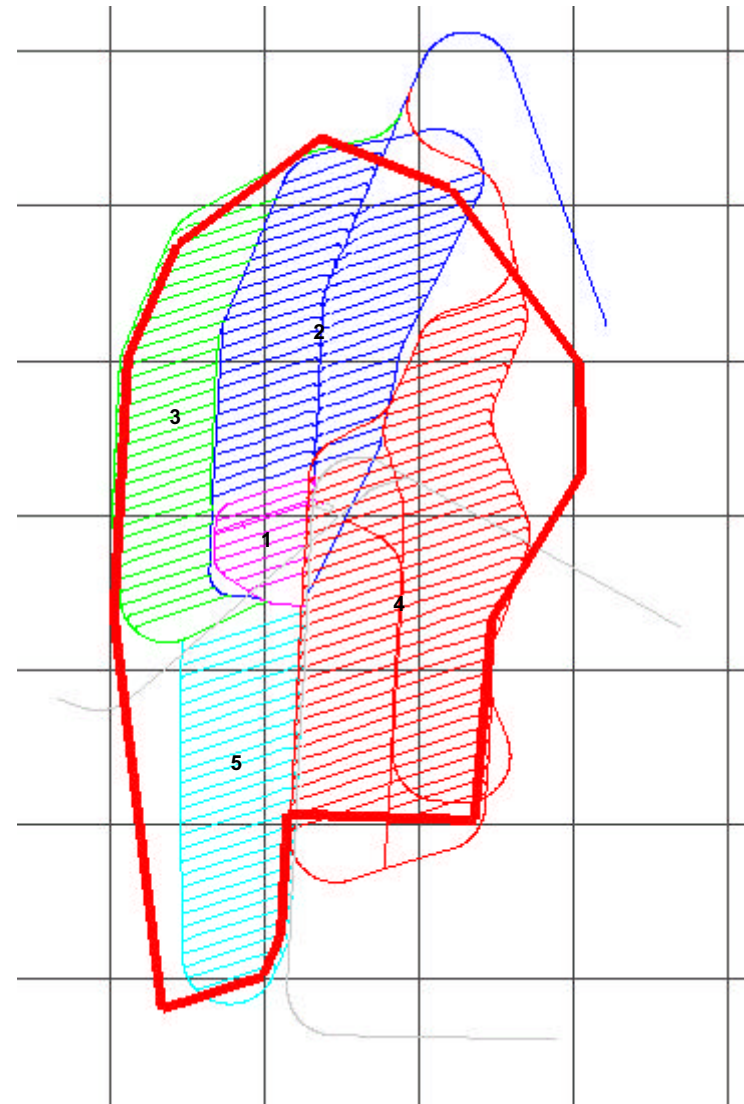
Potential Subsurface Facility Design

- Overall layout has similar footprint as SR, but with four or five smaller panels instead of one or two larger panels
- Indrift configuration similar to design in SR
- Eliminates separate ventilation exhaust drifts-ventilation now runs from one access main through emplacement drift to opposite main
- Conveyance from surface to emplacement drift by Omnidirectional Lift Transporter instead of rail



Potential Underground Layout

- **Modular panel layout**
 - Panels 1-4 sufficient for 70,000 MTHM at up to 2 meter waste package spacing
 - Contingency of approximately 25% with addition of Panel 5
 - Revised ventilation scheme
 - Adds 3rd access ramp for northern construction
 - Modular development allows applying lessons learned in one phase to the next
- **Utilizes ESF for construction of small initial emplacement Panel 1 by 2010**
- **A portion of Panel 1 can be used for additional scientific and engineering testing**



Potential Waste Package Design

- **Little change from design shown In SR**
- **Simplification of closure welds and stress mitigation features**
- **Simplification of lifting trunnion attachments**
- **Longer lived pallet materials**



Changes to WP Final Closure

